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IS THE DESIGN ARGUMENT DEAD?

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The basis of theistic belief is fortunately broader than the theistic arguments. People believe in God before they argue in favor of His existence, and the fortunes of theism are not inseparably bound up with any of the arguments framed in its support. No one, however, who is interested in the rational basis of theology can be indifferent to the fate of an argument which, whatever the philosophical objections to be brought against it, has in all ages of the world made a powerful appeal to human reason.

While objections to the Design Argument alike from the theistic and the anti-theistic camps were made before the time of Kant, the two influences most hostile to it in modern times have been the Kantian philosophy and the Darwinian theory. We know what Heine thought of Kant's theistic philosophy: "I can hear the bell. Kneel down. They are bringing the sacraments to a dying God." The Design Argument was supposed in any case to have received an effectual *coup de grace* at the hands of Darwin, even if it survived the rough handling of Kant's *Critique*.

To destroy knowledge of God in order to make room for faith was the avowed object of the *Critique of Pure Reason*, and the argument of the whole work may be said to culminate in the criticism of the theistic proofs. The essence of Kantism, in spite of the elaborate apparatus of the *Critique*, is quite simple, and has been thus expressed by his translator, Max Müller, in his preface: "That

without which experience is impossible, cannot be the result of experience, though it must never be applied beyond the limits of possible experience." A standing objection to Kant is that he himself transcended the limits of "experience" when he asserted the existence of things-in-themselves, but there is another very obvious objection of kindred import. Reason, with Kant as with everybody else, does in fact "soar beyond the world of sense" (p. 477) and "soar above all possible experience" (p. 513), when an inference is drawn to the existence of our fellowmen.

"We are spirits clad in veils,
Man by man was never seen" —

and it is generally believed that he never can be the object of possible sensible experience in the Kantian sense. The principle of the parsimony of causes might lead us to maintain that our fellowmen are automata, as Descartes supposed animals to be, or might even lead us so deep into the abyss of Solipsism as to say (with Tennyson again),

"Thou canst not prove that I, who speak with thee,
Am not thyself in converse with thyself."

The answer to Kant is that we do constantly "soar beyond the world of sense," and if we did not we could not transact the business of life. Why reduce experience to chaos by setting arbitrary limits to knowledge? If we can and do every day transcend "experience" in the narrow sense by inferring intelligence and purpose behind the actions of our fellowmen, why can we not, as Kant himself apparently allows us to do in the preface to his second edition (p. 702), follow the natural bent of the reason and explain "the wonderful beauty, order, and providence, everywhere displayed in nature," by referring them to "a great and wise Author of the World"?

Kant's own admissions in favor of the Design Argument, whether attributed to candor or to inconsistency, do much to dull the edge of his own criticisms. If there is at present an anti-Kantian reaction in philosophy, a re-examination of his critique of the theistic proofs would be timely.

The topic of Darwinism and Design has been worn threadbare in the discussions of the past fifty years, and no re-opening of the question will be fruitful unless it is motived either by new developments in science or by the discovery of a new philosophical standpoint. The continued criticism of Darwinian Selection, the discussion by Henderson, Wallace, and others of the Fitness of the Environment, and the attempt of Bergson to find a *via media* between Mechanism and Finalism may furnish an excuse for the observations that follow.

I. *Natural Selection and Its Critics.* The great contribution which Darwin made to the thought of the world was, according to Huxley, that he eliminated the teleological factor from the explanation of life. As Weismann, who of course goes beyond Darwin, puts it: "Every species *must* have arisen just where, and when, and in the form in which it actually did arise, as the necessary outcome of the existing conditions of energy and matter, and of their interactions upon each other." Where Weismann puts mechanism in the place of design other interpreters of Darwin substituted chance, and perhaps a cruel chance, mechanism and chance agreeing in the exclusion of purpose.

As Alexander the Great, to the disgust of his Hellenic friends, changed his habits as he extended his conquests, and assumed the dress and manners of the Persians, so the Darwinian theory in extending its dominion over regions remote from the biological field was transformed into a mechanical theory of the universe. J. T. Merx in his *History of European Thought in the 19th Century*

thinks that Darwinism has immensely strengthened the mechanical view of the world. It enthroned mechanism in the very heart of the organic world, where design was suppose to reign. Automatic crowding out, at the expense of those who were crushed, produced overtopping individuals, and these of such excellence that they "give the impression of having been originally designed"; while in fact they are designed as little (or as much) as the tall mountain peak which towers above its neighbor. The secret was out at last. It was shown that a non-purposive mechanism could produce the evidence of design, that the fortuitous could evolve the fit (Vol. ii, pp. 412 f.).

The teleologist will protest against the equation of mechanism with chance which is often assumed in discussions of this character. Mechanism has in fact a closer affinity with purpose than with chance, these two latter being the only two ultimate theories of the universe. All the machines we know about are the result of purpose, and the assumed world-mechanism may naturally be assigned to a similar origin unless there is sufficient reason to the contrary. In human mechanisms the more complicated the machinery and the more elaborate the product, the more evidence is there of a high order of intelligence. The evidence of design is to be found, not in any one wheel or cog, but in the arrangement of the whole, in the coördination of parts and in the product. Kipling's "Secret of the Machines" presents the argument:

"We can pull and haul and push and lift and drive,
We print and plough and weave and heat and light,
We can run and jump and swim and fly and dive,
We can see and hear and count and read and write!

.

Because for all our power and weight and size,
We are nothing more than children of your brain!"

When the man in the street asks who it is that made the mechanism and drives the mechanism, the thorough-going mechanist can only take refuge in a convenient agnosticism. Mechanism is a teleological conception, and it is not to be identified with Chance unless it can be shown how chance can produce the mechanism. Lucretius, it will be remembered, endowed the atoms in their downward movement with a power of declination, a sort of freedom or quasi-consciousness. The fortuitous-concourse theory is still held by so distinguished a writer as Mr. Bertrand Russell in his *Philosophical Essays*; but the belief that the clash of primitive atoms, whether or not endowed with this quasi-consciousness, could result in a cosmos, has been made more difficult by modern physics and astronomy. That "a molecular plebiscite," to use Martineau's phrase, could have resulted in the majestic sweep of an ordered universe, in a unitary world-mechanism, is as improbable as that victory could come to an army each of whose units should hold a referendum before deciding whether to obey the commander's orders.

The case of Darwinism and Design would be simplified if the biologists themselves would decide whether natural selection was the real cause of the appearance of new species. At present the doctors disagree. Professor W. B. Scott in his *Theory of Evolution* (1917) says that the Darwinians are still in the majority or at least have a plurality, since no alternative theory of the origin of species has as many advocates as that of natural selection. His study of fossils, however, leads him to reject Darwinism as not offering an adequate explanation of the observed facts (p. 25), and he quotes Professor Bateson as saying that as to the causes of specific diversity "we have to confess an ignorance almost total." Similarly Professor H. F. Osborn says in his *Origin and Evolution of Life* (1917) that "the causes of the evolution of life

are as mysterious as the law of evolution is certain." A large if not an increasing number of biologists, while dogmatic as to the fact of evolution, are agnostic as to the factors which bring it about. The unsettled state of opinion in scientific circles is reflected by the humorous versifier:

"Let natural selection go;
Its methods are by far too slow.
Poor Darwin's dead, DeVries is king;
Mutations have become the thing."

The final rejection of natural selection would not prove the case for the teleologist, but it would remove from the field the only hypothesis which has attempted to show how chance could mimic the work of design. Professor Scott, while believing that the question of design is metaphysical rather than scientific, puts the case temperately when he says (pp. 30, 31): "In order to hold the evolutionary hypothesis it is not necessary to deny the ideal relationships between the successive gradations of living beings, or to exclude belief in a creative plan, which has been worked out by the method of evolution." The most recent survey of the question from the theological side leads its author to the conviction that "the marks of design which the world exhibits and the testimony which it bears to its Creator, so far from being obscured or diminished by the discovery of the process of Evolution, become clearer, brighter, and more convincing than they ever were before."¹

II. *The Fitness of the Environment.* The world of organisms and organs has been the citadel of the Design Argument, and it was in this citadel that Darwin was supposed to have dealt teleology its death blow. It would be a sort of poetic justice if a new development in evolutionary science should establish teleology again in the stronghold of mechanism, the pre-organic world.

¹ J. N. Shearman, *The Natural Theology of Evolution*, 1916, p. x.

The argument of Professor L. J. Henderson in his striking book, *The Fitness of the Environment* (1913) and in his later article, "The Teleology of Inorganic Nature" (*Philosophical Review*, May, 1916), may be condensed into two propositions: "Logically, in some obscure manner, cosmic and biological evolution are one," and the biologist "may now rightly regard the universe in its very essence as biocentric" (*Fitness*, pp. 278, 312). Further, quoting from his article, the connection between the properties of the three elements, hydrogen, carbon, and oxygen, and the evolution of life which they favor to the maximum extent, is "almost infinitely improbable as the result of chance" (p. 271), and "there is not one chance in millions of millions" that these properties should simultaneously occur.

Professor Henderson has established teleology in a sphere in which there can be no question of selection and its mimicking of design. He has placed an effective weapon in the hands of the theistic philosopher, while he with scientific reserve — for why should the scientist become theologian? — declines to use it himself.² An

² Professor Henderson argues that the order of nature is teleological, but he seeks to share Darwin's agnosticism when it comes to the admission of Mind or Purpose back of nature. Upon this subject, he says, "clear ideas and close reasoning are no longer possible, for thought has arrived at one of its natural frontiers" (p. 281). His positive thesis is (1) that the relation between the original elements and the freedom of evolution is not a chance relation; (2) that the connection between the two "is a causal connection"; (3) that the connection is only intelligible "as a *preparation* for the evolutionary process"; (4) that "we are ignorant of the existence of any cause except mind which can produce results that are fully intelligible only in their relation to later events" (p. 271); and (5) that the relation must be conceived as "teleological," because "there is no other way to describe it" (p. 279). It seems to me that what Professor Henderson says as a scientific specialist may be used to serve the purposes of theistic argument without being discounted by what he says of the frontiers of knowledge.

I do not see that the argument against chance and in favor of teleology is broken by Professor R. B. Perry's criticism in his article, "Purpose as Systematic Unity," in *The Monist*, July, 1917. Professor Perry compares life to a die with the same number on all the faces, while the environment is a die with a million of faces only one of which matches the first die. "That the two should match in any single instance is highly improbable; the chances are millions to one against it. But if it should happen that there was only one trial, its happening to be successful would prove nothing as to there being anything more than chance at work" (p. 373). But

evolutionist of greater fame, the late A. R. Wallace, felt no such scruples. In his latest work, *The World of Life* (1911) taking up the same problem, he speaks of "the existence of a special group of elements possessing such exceptional and altogether extraordinary properties as to render *possible* the existence of vegetable and animal life-forms"; and draws the conclusion that the Mind that caused these elements to exist and then built them up into such marvelous structures "must be many million times greater than those which conceived and executed the modern steam-engine" (p. 416).

To have fitness, preparation, a teleology which excludes chance, or frankly Purpose, thus recognized by competent scientists as lying at the foundation of biological evolution is a gain for the Design Argument, and one from an unexpected quarter. But if a teleological relation is assumed as existing between the inorganic and the organic spheres, surely a similar relation may be assumed between both of these spheres and the realm of humanity. A biocentric view of the world naturally passes over into an anthropocentric view, and we are not surprised to hear Wallace argue that the purpose of the universe is the production of intelligent and moral beings. An astronomer of note, T. C. Chamberlin, closes his recent volume on *The Origin of the Earth* with the remark that "the emergence of what we call the living from the inorganic, and the emergence of what we call the psychic from the physiologic, were at once the transcendent and the transcendental features of the earth's revolution." Such extensions of the Design Argument have

the teleological character of the inorganic world is seen not in the appearance of one element among millions of other possible elements, but in the simultaneous appearance, among other less favorable possibilities, of certain necessary elements, necessary compounds and necessary properties of compounds, all of maximum advantage for life. It is as though there were a million of dice thrown together and all at the first throw turned up sixes. It is this coincidence of factors indefinitely numerous and all coöperating to the maximum freedom of organic evolution that Henderson thinks is staggering to the advocates of chance.

been made, in different ways, by Mr. Balfour and Professor Royce.

Assuming, perhaps too hastily, that in the organic sphere the fortuitous might evolve the fit, and that selection might counterfeit design, Mr. Balfour, in his *Theism and Humanism* (1915) points out the immeasurable improbability that a fortuitous arrangement of molecules should produce not only living matter, but living matter of the kind upon which selection might act. His main purpose, however, is not to carry the argument downward into the pre-organic sphere but upward into the realms of æsthetics, ethics, and science. He would do something "to show that 'design' is demanded by all that we deem most valuable in life, by beauty, by morals, by scientific truth; and that it is design far deeper in purpose, far richer in significance, than any which could be inferred from the most ingenious and elaborate adjustments displayed by organic life" (p. 51).

Professor Royce has given a new turn to the argument for the Fitness of the Environment by insisting in his *Problem of Christianity* that nature, inorganic and organic, is pre-adapted to be understood by human intelligence. That man can weigh the worlds in the balance of his thought, and summarize in his generalizations so vast and complex a range of facts, is an indication that the relation between the facts and the generalizations is not fortuitous. A biocentric view of the universe is of necessity a teleological view, and it naturally points on to an anthropological view. The considerations urged by Henderson and Wallace, while not entirely new in the history of theistic reasoning, have given a new impetus to the Design Argument and have brought within its sweep all the periods of natural history.

III. *Bergson's Critique of Finalism.* The story of evolution as Bergson tells it, certainly in a fascinating manner,

is a drama in three acts. Life or consciousness, the hero, is imprisoned by matter, the villain, and is struggling blindly to be free. In the first act, the vital impulse tunnels its way into the vegetable world; but as it reaches only the lethargy and immobility of vegetable forms, the result is so far a failure. The second act finds consciousness working its way into the animal world and attaining mobility; but, arrested at the stage of instinct, it can only respond to the environment in a way which is patterned after the mechanical action of matter. In the third act, "by a tremendous leap," consciousness, in spite of the efforts of matter to drag it down to the plane of mechanism, reaches at last spontaneity and freedom in man.

By what means then did our hero, life or consciousness, make his escape from imprisoning matter? It was not by Mechanism, for the mechanism of matter was all the time opposing life and hindering its advance. It was not by Chance; for, as Bergson acutely argues in opposition to Darwinian selection, chance could not secure the coördination of parts necessary to the evolution of living beings, nor on different lines of development fashion two organs so much alike as the eye of a mollusk and the eye of a man. It was not by Purpose; for purpose implies finality, fixity, with no play for the reality of freedom or of time. Bergson is evidently in search of a category which shall be neither mechanism, chance, nor purpose; and he finds it in the conception of an original vital impulse, neither mechanistic, fortuitous, nor purposive, working its way toward consciousness and freedom against the downward current of matter.

Sympathizing with Bergson's revolt against mechanism and absolutism, we may venture to ask whether his semi-mystical vital impulse is clearly enough conceived and described to answer the purposes of philosophy, and whether it is able to fulfil its author's intention, namely,

to safeguard free-will and to vindicate the reality of time.

When the curtain rises on Bergson's engaging drama of *Creative Evolution*, the principal actors, life or consciousness and matter, are already on the stage and already in action. But how did life become imprisoned in matter? Whence the impulse to escape from matter's entanglements? And what were the antecedents of matter, the villain of the plot? To these difficult questions we find in Bergson no consistent and satisfactory answer. His prevailing exposition is based on a dualism of life and matter, regarded as two coördinate but antagonistic currents, one moving upward and the other downward. Both life and matter are then to be regarded presumably as manifestations of one underlying principle, if the question of origin is raised. But in the section on the Genesis of Matter he speaks of matter as being the arrest of life, saying that we must believe that life as the inverse of materiality is the creator of matter by its own interruption alone (p. 245). Still a third theory is suggested when it is said that life or consciousness on our planet, before the condensation of nebula was achieved, was in a state of dream or sleep. It took its first flight when by an inverse movement the nebulous matter appeared. Here matter seems in a way to be the creator or at least the awakener of life (pp. 256, 257). Life in fact is defined as a tendency to act on brute matter.

This vacillation in conceiving the relations between life and matter suggests that Bergson's vital impulse is to be regarded as a scientific hypothesis (some would say as a poetic fancy) rather than as an ultimate or metaphysical theory. This impression is strengthened by a reading of *Creative Evolution*, which leaves one in doubt whether God is to be identified with the vital impulse, and is working up in the course of evolution toward consciousness and freedom; or whether God is to be

regarded as the creator of the vital impulse, and is thus a "creator of creators." There are hints that Bergson believes that his system is capable of a theistic interpretation, but the decisive word as to the real quality of his theism is scarcely to be found within his *Creative Evolution*. Bergson, we may insist, is not in the position to speak the authoritative word on Finalism, until he makes clearer his ultimate metaphysical view, that is, his view of the nature of God and His relation to the world and to life.

Our second question was whether Bergson's vital impulse was competent to do the work assigned to it, that is to safeguard the interests of time and of free-will. Here again the uncertainties as to the origin of the vital impulse and its relation to matter come back to vex us. With Bergson time alone has primary reality, while the spatial world has only artificial or symbolic existence. Objects in space are merely, says Bergson in a striking phrase, the mirrors of our possible actions. But what of the geologic or astronomical ages before the appearance of life or the rise of intelligence? These treat only of that which is reversible, mechanical, calculable, not of real duration, and so they cannot in the proper sense be real. These ages and their history collapse into chaos. There were then no laws of nature or no cosmos at all, for the categories of intelligence and the laws of nature, we are told, have evolved together as the result of the push of the upward stream of life against the downward stream of matter. There can be no question with Bergson of the "fitness of the environment" in the pre-organic period, nor can we ask with a popular preacher, "When God was filling up his coal bins in Pennsylvania millions of years ago, where were the men who were going to burn that coal? Tell me God does not plan ahead!" For with Bergson, when he is strictly interpreted, there were no chemical properties, no elements,

no coal bins or coal deposits, perhaps no matter at all, before the vital impulse or original impulsion began to work. If it be said that the original impulse was eternal, the difficulty for Bergson would be still more serious, for eternity is his *bête noir* which he has used all his ingenuity to exorcise from his system. Bergson's exposition of time is admirable from a psychological standpoint, but the complaint will be made that he reduces it to so narrow a rôle that it cannot be viewed as the very stuff of reality. It is interesting to notice that a recent critic of Bergson, Professor Pringle-Pattison in his *Idea of God* (1917) complains of his want of balance in his treatment of the past and of the future. In his rejection of finalism and his insistence upon the unpredictability of future action, Bergson has broken the link between the present and the future, and has forgotten "the essentially anticipatory character of conscious action, as purposive, and all that is implied in the causality of the ideal" (p. 377).

Bergson is right in championing the cause of freedom against systems whether naturalistic or monistic that would swallow it up. But the interests of freedom, it may be maintained, are far safer in a universe, where, as the finalist believes, will and purpose are enthroned than in a world controlled by blind, capricious, and unintelligent forces. These interests are safer in such a finalistic world than in a world whose fortunes depend on a mere tendency to act on brute matter, without pre-conceived objects to be attained, or predetermined grooves to direct activity. Such a mere tendency to act on brute matter, such a blind *vis a tergo*, would not lead out the lines of life into complexity, beauty, spontaneity, and freedom, any more than the force of gravitation would bring down the mountain water to the city dwellings without aqueducts and mains laid for that purpose. Such a general tendency to act without foresight of ends

will in fact be another name for mechanical force or chance, the impotence of which to account for the course of evolution Bergson has so acutely set forth.

The Design Argument is not dead, because the state of opinion in the biological field is not unfavorable to the conclusion that intelligent Purpose is at the heart of the universe; because the study of chemistry and physics leads to a biocentric, and the study of ethics and æsthetics leads to an anthropocentric view of the world; and because no half-way house has as yet been found between the ultimate theories of chance and purpose. It is not likely to die because, in the words of Kant, "it gives life to the study of nature, deriving its own existence from it, and thus constantly acquiring new vigor."

At the beginning of the war faith was tried, and some adopted Mr. Wells' view of a finite God, while others were tempted to believe that history had no meaning, but that progress, to use an expression of Mr. G. B. Shaw, was "an infinite comedy of illusion." There has been happily a change in sentiment, as the moral issues of the struggle and the possible beneficent effects have been more clearly distinguished. We may now be thankful that we are living "in freedom's crowning hour," and that we are able to say,

"I saw the powers of darkness take their flight;
I saw the morning break."